10/19/1998

DEPARTMENT OF ENVIRONMENTAL QU

PERMITTING & COMPLIANCE DIVISION
Air & Waste Management Bureau

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October 19, 1998

Jon Nickel
Environmental Manager
ASARCO Inc.
100 Smelter Ave.
East Helena, MT 59635

Dear Mr. Nickel:

Enclosed are two inspection reports of department inspections of the ASARCO Inc., East Helena facility that are related to the 04/21/98 and 08/13/98 sulfuric acid discharges at that location. If you have any questions please call or write.

As you will observe from the report, the department found no violations of the hazardous waste regulations during the 04/29/98 and 04/30/98 inspections. In meeting the requirements of ARM 17.54.402 (Hazardous Waste Determination), it is important that ASARCO closely adhere to the requirements of this regulation. With respect to the contaminated lime rock, ASARCO's reliance on the exclusionary language found in 40 CFR 261.4 (a)(7) is not appropriate. That regulatory exclusion applies to spent sulfuric acid and the incident involved the discharge to the ground of that material. I would refer you to ARM 17.54.201 (27) and (28) for the definition of discharge and disposal. It appears that ASARCO, in identifying this waste, should have relied on the definition for the characteristic of corrosivity (ARM 17.54.322) and the toxicity characteristic (ARM 17.54.324).

I wish to thank you for your correspondence dated May 15, 1998 in which you provided the analytical results of the sulfuric acid produced at the ASARCO, East Helena plant. As you pointed out in your letter, the virgin sulfuric acid exceeded the Toxicity Characteristic regulatory levels for lead, mercury and selenium. I understand that you will be conducting TCLP tests in the range of the soil/sulfuric acid mixture. This office would appreciate receiving a copy of those test results when they become available.

Also, as you stated in your letter, it is ASARCO's position that the remediation of the sulfuric acid spill constituted " ,... the cleanup of the commercial chemical product and its immediate reclamation are outside of RCRA jurisdiction. 40 CFR 261.2 (c) - Table 1." Please be aware that the exclusion you referred to pertains to commercial chemical products listed in 40 CFR 261.33. It is the department's understanding that the sulfuric acid produced at the ASARCO, East Helena

plant is considered to be food grade sulfuric acid which is not listed in 40 CFR 261.33. Therefore, if the contaminated media resulting from the sulfuric release were to exhibit a characteristic of a hazardous waste then the above cited exclusion would not apply.

With respect to the introduction of the contaminated limerock in the plant furnace, I must refer you to Subpart H of 40 CFR Part 266 which addresses hazardous waste being burned in boilers and in industrial furnaces. If the contaminated limerock were to exhibit a characteristic of or contain listed hazardous waste then the following regulations would apply. 40 CFR 266.100 (c) specifically places owners and operators of smelting, melting and refining furnaces in a category of being conditionally exempt from regulation under 40 CFR Subpart H with the exception of 40 CFR 266.101 and 266.112.

40 CFR 266.101 pertains to the management of hazardous waste prior to burning for generators of hazardous waste that is burned in a boiler or industrial furnace. Such parties are subject to all applicable generator requirements found in 40 CFR Part 262. In addition, owners and operators that store hazardous waste that is burned in a boiler or industrial furnace are subject to applicable provisions of 40 CFR Parts 264 and 265 Subparts A through L.

40 CFR 266.112 pertains to the regulation of residue derived from the burning or processing of hazardous waste in a boiler or industrial furnace. ASARCO should be aware that such residues are not excluded from the definition of a hazardous waste unless the owner or operator meets certain requirements

Also, from the report pertaining to the 08/13/98 sulfuric acid discharge the department did not note any violations of hazardous waste requirements. In addition, the department concurs that no further remediation of soils at this second sulfuric acid discharge site is required.

As we have previously discussed, further site evaluations and remediation at these locations may be required under department hazardous waste corrective action and/or water quality authorities.

I want to thank you for your submittal of the revised ASARCO SPCC plan, CERCLA emergency response procedure and RCRA contingency plan. The RCRA contingency plan portion of the document appeared to be very thorough and well presented. As page 9-3 of that document states, spilled materials at the East Helena smelter may be subject to hazardous waste regulation. ASARCO must implement the provisions of the plan and provide for the proper disposition of all spilled materials.

Sincerely,

William Potts

FIELD INVESTIGA'I'ION REPORT

SITE: ASARCO Inc.-East Helena

EPA ID#: MTD006230346

LOCATION: South of East Helena

DATE: 04/29/98 and 04/30/98

CONTACT: Jon Nickel

INSPECTION TEAM: William Potts and Adel Johnson

PURPOSE: Compliance Evaluation Inspection

REPORT PREPARED BY: William Potts

BACKGROUND: ASARCO Inc (ASARCO) is a custom primary lead smelter located near East Helena. The smelter maintains a sinter plant to in part reduce the sulfur content of unprocessed ore. Gasses from the sinter plant are then processed in an acid plant to produce concentrated sulfuric acid.On 04/22/98, the hazardous waste program received information from the department's Enforcement Division that on 04/21/98 a discharge of approximately 400 to 500 gallons of sulfuric acid occurred at the smelter. On 04/28/98, information was received from ASARCO personnel that a portion of contaminated soil from the discharge was to be managed as hazardous waste. A limited compliance evaluation inspection was scheduled for 04/29/98 which was to only address contaminated media associated with the sulfuric acid dischage.

RESULTS OF INSPECTION: On 04/29/98, the inspection team met with Jon Nickel, ASARCO Environmental Manager, who provided a briefing of the incident and action taken by ASARCO personnel. The discharge was discovered on the afternoon of 04/21/98 which resulted from a break in an acid distribution line in the acid tank storage area. ASARCO personnel observed a three foot long crack in the pipe between two of the storage tanks and a "small" stream of sulfuric acid discharging to the ground. The pipeline was closed off, product blown out to a storage tank and repaired the same afternoon. Mr. Nickel estimated that between 400 and 500 gallons of sulfuric acid was discharged to the ground. The acid tank farm is unpaved and the areas around the tankage is covered with a layer of lime rock. Mr. Nickel stated that the lime rock in the impacted area was removed and placed in the facility's ore storeage building with the intent of placing it in the plant's furnaces. Approximately 30 cubic yards of lime rock were removed. Between 50 and 60 tons of contaminated soil in the discharge area were also removed and ASARCO intends to manage the soil as a hazardous waste.

The contaminated soil had been loaded onto a gondola railcar with other contaminated soil generated by construction activity in the plant. Mr. Nickel could not provide an exact

description of where the latter soil had been generated. The waste is to be shipped to Laidlaw's Grassy Mountain facility in Utah. Attached are copies of a waste profile sheet and a notification of waste acceptance for this shipment. The waste has been profiled as contaminated soil with the waste codes of D004, D005, D006, D007, D008, D010 and D011. The railcar was not inspected because at the time of the inspection it was offsite being weighed in preparation for shipment. Total weight of this shipment was approximately 90 tons.

The contaminated lime rock had been placed in a large concrete bin within the ore storage building and mixed with virgin lime rock. It was physically impossible to view or identify the contaminated material. During the inspection, Mr. Nickel stated that it was ASARCO's intent to process the contaminated lime rock in its furnaces' and therefore reclaim sulfuric acid. By doing so. the company was claiming that the material would enjoy an exclusion as a solid waste as defined in 40 CFR 261.4 (a)(7) which excludes as a solid waste "Spent sulfuric acid used to produce virgin sulfuric acid,..." In addition, ASARCO regarded its action of benefically using the lime rock in the smelter as "making more sense" then sending it to a hazardous waste landfill. The inpection team requested information as to the contents of virgin sulfuric acid produced at the facility, specifically the presence of heavy metals. Mr. Nickel indicated that he would have that information compiled and forwarded to the department.

ADDENDUM

On 04/30/98, William Potts conducted a follow-up inspection at the ASARCO plant to examine the railcar and its contents. The railcar was located on a siding on the west side of the ore storage building. The railcar had been lined prior to loading and was tarped with a heavy plastic material which was securely fastened to sides of the railcar. The railcar was marked with an accumulation start date of 04/17/98 and labeled as hazardous waste. Mr. Nickel stated that load would be placarded as a 3077 material.

POLLUTION PREVENTION REVIEW: NA

RECOMMENDATIONS: No violations of hazardous waste regulations observed at the time of inspections. Request from ASARCO written information as to the contents of sulfuric acid product, specifically the presence and quantity of heavy metals.

FIELD INVESTIGATION REPORT

SITE: ASARCO Inc., East Helena

EPA ID#: MTD006230346

LOCATION: South of East Helena

DATES: 08/14/98, 08/18/98 and 08/28/98

CONTACT: Jon Nickel

INSPECTION TEAM: Adel Johnson, William Potts and Susan Zazzali

PURPOSE: Compliance Evaluation Inspection

REPORT PREPARED BY: William Potts

BACKGROUND: On 08/14/98, I received a telephone call from Susan Zazzali, U.S. EPA, informing me of a sulfuric acid discharge at the ASARCO, East Helena plant.

RESULTS OF INSPECTIONS: On that day, I inspected the discharge area at the facility. ASARCO contacts during this inspection were John Cavanaugh and Terry Coble. ASARCO personnel explained that a ruptured pipe in a cooling tower at the decolorization plant releasing an unknown quantity of 93 percent grade sulfuric acid to the acid plant cooling water circuit. ASARCO personnel observed a significant drop in the pH (in the range of 2.0) of the plant cooling water at which time approximately 25 - 55 gallon drums of sodium hydroxide were deposited in the cooling water tower. In the early morning of 08/13/98, an ASARCO worker observed an "upwelling" of cooling water in the acid plant and outside in the vicinity of the CIL cooker. Apparently, soon after this discovery the smelter operations were closed down.

During this time frame, ASARCO personnel took water samples from the blow down cooling tower. Laboratory analysis indicated the following metal values: arsenic - 23ppm; cadmium - 30ppm and lead - 10.2 to 11.2ppm. At the time of the inspection, ASARCO personnel speculated that the addition of caustic and acid to the cooling water may have released scale and residue from the cooling tower which may explain the elevated levels of metals.

I inspected the decolorization plant, the cooling tower area and the CIL cooker (which is part of the acid plant). At the CIL cooker, I observed that contaminated soil had been removed to expose a 24 inch water line which appeared to be the source of the release. Three holes in the pipe had been plugged and excavation of soils stained with moisture was to continue. At the time of the inspection, approximately one half of a railcar had been filled with contaminated soil. The railcar was unlined but properly labeled.

On 08/18/98, accompanied by Susan Zazzali, U.S. EPA, a follow-up inspection was conducted at the facility. The inspection team was accompanied by Jon Nickel, Environmental Manager, and other ASARCO personnel. The excavated area alongside the CIL cooker was approximately 30'x20' and 12' deep. During the initial excavation, further leaks were discovered in underground acid plant water lines. ASARCO personnel removed contaminated soil at a right angle to the original excavation to a depth of approximately 10' and extending for 40' by 10'. The second excavation had extended to the acid plant tank farm and abutted a 40,000 gallon aboveground clarifier tank. At the time of this inspection, contaminated soil was being placed in five lined railcars. Three of the railcars had attached hazardous waste labels with accumulation start dates of 08/07/98, 08/13/98 and 08/13/98. The other two railcars were being loaded and I did not observe hazardous waste labeling. It is estimated that each railcar will be loaded with 85 tons of soil. Therefore, there was approximately 425 tons of contaminated soil in accumulation. Mr. Nickel estimated that an additional three to four railcars would be filled with contaminated soil. Photographs of the excavation and railcars are attached to this report.

Mr. Nickel stated that ASARCO would continue to excavate soil on the north side of the CIL cooker building for a distance of three feet or until there was no further visual evidence of moisture in the soil.

On 08/20/98, Mr. Nickel telephoned and stated that blanks were being placed in the waterline and the intent was to sleeve the line. No further soil excavation had been done. On 08/21/98, Mr. Nickel called and said that over the weekend slip lines would be in place, a portion of the line would be replaced and the plant would be back in operation on 08/24/98. Mr. Nickel further stated that on 08/24/98 further excavation of soil would be undertaken at the release site.

On 08/28/98, a sampling inspection was conducted at the excavated area. A total of six samples were taken: three composite samples from the bottom of the excavation and three background samples taken from side walls. The background samples were taken in the proximity of the composite samples and pulled from areas that did not appear to have been impacted by the release. All samples were split with ASARCO personnel. Maps indicating the sampling points are attached to this report. Also attached are department and ASARCO laboratory reports; as well as chain of custody record, sampling receipt and a shipping manifest.

ASARCO composite samples "A" and "B" were broken in transit to the laboratory and, therefore, were not analyzed. All department and ASARCO samples were analyzed for TCLP metals and total metals. Department samples also were analyzed for pH.

On 09/28/98, Mr. Nickel informed me that the sulfuric acid release generated approximately 1500 gallons of acid plant process water. ASARCO, as a result of this release, accumulated between eight and nine railcars of contaminated soil (680 to 765 tons).

ASARCO determined that any further excavation of the area was not warranted for the following reasons: the majority of water stained soil had been removed; the proximity to groundwater and that any further excavation would jeopardize the structural integrity of adjacent buildings and above ground storage tanks.

RECOMMENDATIONS: The following recommendation is based on an evaluation of the portions of the enclosed laboratory reports that address the Toxicity Characteristic. Further, the recommendation only addresses remediation of soils resulting from the 08/13/98 sulfuric acid spill which is regulated by hazardous waste statutes and regulations. No further remediation of soils is required at this spill site. Advise ASARCO that further site evaluation and remediation at this location may be required under hazardous waste corrective action authorities.